In the Claims:

Cancel Claims 47-48, 53-54, 57 and 66, add claim 67, and amend claims 51, 56, 59, 64 and 65.

1-50 (Cancelled).

51. (Currently amended). A apparatus for tempering at lease one specimen, comprising

- one of pipette tip and syringe, made of plastic-based, at least partially electrically conductive material for at least one specimen, and
- a device (6, 7, 9) for applying an electric current and/or electric voltage to the plastic-based electrically conductive material in order to cause a resistance heating of at least some part of the plastic-based electrically conductive material, which heating heats a specimen disposed in the one of the pipette tip and syringe, wherein the device (6, 7, 9) for applying an electric current and/or an electric voltage, and a capacitance measuring circuit are adapted to be connected to the one of the syringe and pipette tip via a needle bed adapter (19).

52. (Previously presented). The apparatus according to claim 51, wherein, at least one wall of the one of pipette tip and syringe defining a memory

location and/or memory volume (5, 15) for the specimen or a portion or a layer thereof is made of the plastic-based electrically conductive material.

53-54. (Cancelled).

55. (Previously presented). The apparatus according to claim 51, wherein the one of pipette tip and syringe is made of one or more integrally interconnected plastic materials.

56. (Currently amended). The apparatus according to claim ~~51~~ 67, wherein the one of the pipette tip and syringe and the devices (6, 7, 9) for applying an electric current and[[/or]] an electric voltage and[[/or]] the capacitance measuring circuit have electric contacts (8, 9) via which at least one electric current and/or electric voltage can be applied to the one of the pipette tip and syringe and/or is adapted to be connected to the capacitive measuring sensor (17) via the capacitance measuring circuit.

57. (Cancelled).

58. (Previously presented). The apparatus according to claim 51, which has an apparatus portion which comprises the device (6, 7, 9) for applying an electric current and/or an electric voltage and/or the capacitance measuring circuit

and/or the needle bed adapter (19) and is separable from one of the pipette tip and syringe.

59. (Currently amended). The apparatus according to claim 51, wherein the separable apparatus portion (6, 7, 9) is stationary and/or portable.

60. (Previously presented). The apparatus according to claim 58, wherein the separable apparatus portion (6, 7, 9) comprises a proportioning device, and/or spectrometer, and/or device for treating reaction vessel, and/or for treating centrifuge vessel and/or for treating microtitration plates.

61. (Previously presented). The apparatus according to claim 51, wherein the device (6, 7, 9) for applying an electric current and/or electric voltage has a direct-current source and/or an alternating-current source and/or a direct voltage and/or an alternating-current source.

62. (Previously presented). The apparatus according to claim 51, wherein the one of the pipette tip and syringe and/or the device (6, 7, 9) for applying an electric current and/or an electric voltage have one or more temperature measuring devices (11, 12, 13).

63. (Previously presented). The apparatus according to claim 51, wherein the device (6, 7, 9) for applying an electric current and/or electric voltage has a device for controlling the heating of the specimen.

64. (Currently amended). A method for tempering at least one ~~sample~~ specimen, wherein a plastic-based electrically conductive material of a specimen carrier (1, 14) consisting at least partially of this material for at least one specimen is applied to by an electric current/an electric voltage which causes a resistance heating of at least one portion of the plastic-based electrically conductive material, which resistance heating heats a specimen disposed on the specimen carrier (1, 14),

wherein a volume of the specimen is capacitively measured on the specimen carrier,

wherein at least one capacitive measuring sensor (17) of the specimen carrier (14) which is associated with a memory location and/or a volume(15) for a specimen and is connected to a capacitance measuring circuit for a capacitive measurement, and

wherein the at least one capacitive measuring senor (17) has capacitator plates formed by the plastic-based electrically conductive material of which the specimen carrier (14) is partially made are connected to the capacitance measuring circuit for a capacitive measurement.

65. (Currently amended). A method for tempering at least one ~~sample~~ specimen, wherein a plastic-based electrically conductive material of a specimen carrier (1, 14) consisting at least partially of this material for at least one specimen is applied to by an electric current/an electric voltage which causes a resistance heating of at least one portion of the plastic-based electrically conductive material, which resistance heating heats a specimen disposed on the specimen carrier (1, 14), and wherein the specimen (14) is contacted by means of electrically conductive needles (20) in order to apply the electric current/the electric voltage to the specimen carrier (14) for resistance heating and/or to connect the capacitance measuring circuit to the capacitive measuring sensor (17).

66. (Cancelled).

67. (New) A apparatus for tempering at lease one specimen comprising

- one of the pipette tip and syringe made of plastic-based, at least partially electrically conductive material for at least one specimen, and
- a device (6, 7, 9) for applying an electric current and/or electric voltage to the plastic-based electrically conductive material in order to cause a resistance heating of at least some part of the plastic-based electrically conductive material, which heating heats a specimen disposed in the one of the pipette tip and syringe,

wherein the one of pipette tip and syringe has at least one capacitive measuring sensor (17) associated with a memory location and/or memory volume (15) for a specimen to measure the volume of at least one specimen, and a capacitance measuring circuit connected to the capacitive measuring sensor (17), and

wherein the capacitive measuring sensor has capacitor plates (17) which are formed of a same material of which the one of pipette tip and syringe is partially made.